What is Claimed:

1. A process, comprising:

providing a nanotube dispersion comprising a plurality of nanotubes and a liquid;

contacting said nanotube dispersion with a polymer melt; and

mixing said nanotube dispersion with said polymer melt to provide a nanotube composite melt.

2. The process according to claim 1, wherein said contacting is characterized as having a contact pressure and a contact temperature, and said liquid is characterized as having a vapor pressure higher than said contact pressure at said contact temperature.

3. The process according to claim 2, further comprising removing vaporized liquid from said nanotube composite melt.

4. The process according to claim 3, wherein said nanotubes are mixed into said polymer melt prior to completely removing said vaporized liquid from said nanotube composite melt.

5. The process according to claim 1, wherein said contacting is characterized as having a contact pressure and a contact temperature, and said liquid is characterized as having a vapor pressure lower than said contact pressure at said contact temperature.

6. The process of claim 5, wherein said nanotube dispersion comprises SWNTs.

7. The process of claim 5, wherein the concentration of said plurality of nanotubes relative to said nanotube dispersion is in the range of from about 0.001 mg/ml to about 2 mg/ml.

8. The process of claim 5, wherein the concentration of said plurality of nanotubes relative to said nanotube dispersion is in the range of from about 0.01 mg/ml to about 1 mg/ml.

9. The process of claim 5, wherein the concentration of said plurality of nanotubes relative to said nanotube dispersion is in the range of from about 0.1 mg/ml to about 0.5 mg/ml.

10. The process of claim 1, wherein said contact pressure is about atmospheric pressure.

11. The process of claim 1, wherein said contact temperature is about the temperature of the polymer melt.

12. The process of claim 1, wherein said liquid is characterized as having a boiling point temperature greater than said contact temperature.

13. The process of claim 1, wherein said liquid is characterized as having a vapor pressure lower than atmospheric pressure at said contact temperature.

14. The process of claim 12, wherein said boiling point temperature is at least about 1°C greater than said contact temperature.

15. The process of claim 12, wherein said boiling point temperature is at least about 3°C greater than said contact temperature.

16. The process of claim 12, wherein said boiling point temperature is at least about 10°C greater than said contact temperature.

17. The process of claim 12, wherein said boiling point temperature is at least about 20°C greater than said contact temperature.

18. The process of claim 12, wherein said boiling point temperature is no more than about 50°C greater than said contact temperature.

19. The process of claim 1, wherein said liquid comprises water.

20. The process of claim 19, wherein said liquid further comprises a surfactant, a dispersing agent, or any combination thereof.

21. The process of claim 1, wherein said liquid comprises an organic solvent.

22. The process of claim 21, wherein said organic solvent has a boiling point temperature in the range of from about 100°C to about 250°C.

23. The process of claim 21, wherein said organic solvent is capable of solubilizing, dispersing, or suspending individual carbon nanotubes, carbon nanotube bundles, carbon nanotube ropes, or any combination thereof.

24. The process of claim 21, wherein said organic solvent comprises an alkane group, an aromatic group, a halogen atom, a nitrogen atom, a sulfur atom, an oxygen atom, or any combination thereof.

25. The process of claim 23, wherein said organic solvent comprises DMF, toluene, trichlorobenzene, or any combination thereof.

26. The process of claim 5, wherein said liquid is compatible with said polymer melt.

27. The process of claim 5, wherein said liquid is incompatible with said polymer melt.

28. The process of claim 5, wherein said polymer melt comprises a thermoplastic resin, a thermoplastic elastomer, a thermosetting resin, a radiation curable resin, a crosslinkable rubber precursor, an oligomer, or any combination thereof.

29. The process of claim 28, wherein said thermoplastic resin comprises an acrylic resin, a vinyl aromatic resin, a SAN resin, an ABS resin, a polyester resin, a polycarbonate resins, a PEEK resin, a halogenated resin, a polyamide resin, a polyacetal, a polyolefin, or any combination thereof.

30. The process of claim 5, wherein said mixing comprises compounding, kneading, blending, stirring, dispersing, shearing, or any combination thereof.

31. The process of claim 5, wherein said contacting comprises dripping, pouring, flowing, coating, injecting, spraying, or any combination thereof, of said nanotube dispersion onto said polymer melt.

32. The process of claim 5, wherein at least a portion of said plurality of nanotubes are characterized as being agglomerates of nanotubes smaller than about 100 microns.

33. The process of claim 5, wherein said nanotube dispersion is characterized as being a homogenous fluid.

34. The process of claim 33, wherein said homogenous fluid is characterized as having substantially no particles visible to the unaided eye.

35. The process of claim 33, wherein said homogenous fluid is characterized as having substantially no particles larger than about 100 microns.

36. The process of claim 5, wherein the concentration of said plurality of nanotubes relative to said nanotube dispersion is in the range of from about 0.1 mg/ml to about 0.4 mg/ml, wherein a 0.5 millimeter thick sample of said nanotube dispersion is characterized as being a homogeneous grey fluid.

37. The process of claim 5, further comprising sonicating said nanotubes in said liquid.

38. The process of claim 5, further comprising removing vaporized liquid from said nanotube composite melt.

39. The process of claim 38, wherein said nanotubes are incorporated in said polymer melt prior to said liquid being essentially completely vaporized.

40. The process of claim 5, further comprising increasing the temperature of said nanotube composite melt to effect removal of said liquid.

41. The process of claim 40, wherein the temperature of said nanotube composite melt is increased to a temperature greater than the boiling point temperature of said liquid.

42. The process of claim 5, further comprising extruding said nanotube composite melt to form a nanotube composite extrudate.

43. The process of claim 42, wherein said nanotube composite extrudate is in the form a film, sheet, fiber, tube, profile, rod, or any combination thereof.

44. The process of claim 5, further comprising melt spinning said nanotube composite melt to form a nanotube composite fiber.

45. A composition made according to the process of claim 1.

46. A fiber, comprising:

a polyolefin thermoplastic resin; and

greater than 10 weight percent and less than about 30 weight percent, based on fiber weight, of aligned nanotubes.

47. The fiber of claim 46, wherein said aligned nanotubes are characterized as having a distribution function FWHM of less than about 30 degrees.

48. The fiber of claim 46, wherein said fiber is characterized as having a thermal conductivity greater than about 1 $Wm^{-1}K^{-1}$.

49. The fiber of claim 46, wherein said fiber is characterized as having a thermal conductivity greater than about 2 $Wm^{-1}K^{-1}$.

50. The fiber of claim 46, wherein said fiber is characterized as having a thermal conductivity greater than about 5 $Wm^{-1}K^{-1}$.

51. The fiber of claim 46, wherein said fiber is characterized as having a thermal conductivity greater than about 10 $Wm^{-1}K^{-1}$.

52. A fiber, comprising:

a polyolefin thermoplastic resin; and

aligned nanotubes, wherein said aligned nanotubes are characterized as having a distribution function FWHM of less than about 30 degrees.

53. The fiber of claim 52, wherein said aligned nanotubes are characterized as having a distribution function FWHM of less than about 20 degrees.

54. The fiber of claim 52, wherein said aligned nanotubes are characterized as having a distribution function FWHM of less than about 10 degrees.

55. The fiber of claim 52, wherein said fiber is characterized as having a thermal conductivity greater than about 1 $Wm^{-1}K^{-1}$.

56. The fiber of claim 52, wherein said fiber is characterized as having a thermal conductivity greater than about 2 $Wm^{-1}K^{-1}$.

57. The fiber of claim 52, wherein said fiber is characterized as having a thermal conductivity greater than about 5 $Wm^{-1}K^{-1}$.

58. The fiber of claim 52, wherein said fiber is characterized as having a thermal conductivity greater than about 10 $Wm^{-1}K^{-1}$.